

Hearing Protection

Employers have responsibility

Every employer is legally responsible for providing a workplace free of excessive noise hazards, which can permanently damage workers' ability to hear and ultimately their quality of life.

Continuous noise is the most common cause of noise-induced hearing loss in workers. Over time, it causes damage to the receptor cells in the inner ear. This type of hazard is especially prevalent in auto and truck repair shops, machine shops, the construction industry, printing plants, gravel and rock crushing operations, nurseries and other agriculture or forestry operations where workers rely on equipment to perform tasks, mill operations and many other heavily mechanized manufacturing occupations.

If you're not sure whether noise reaches hazardous levels in your workplace, ask yourself if normal conversation is difficult due to noisy conditions or if you have had any employee complaints about noise. If so, you may have noise levels that require you to take action.

Whether noise produces a permanent loss of hearing in exposed workers depends on several factors:

- **Loudness** - The loudness or intensity of sound is measured in decibels
- **Exposure time** - The longer a person is exposed to loud, high-pitched noise, the more likely it will contribute to hearing loss
- **Individual susceptibility to noise-induced hearing loss** - This may be due to congenital defects, age, etc.
- **Presence of engineering controls** which reduce noise at the source

Onset is gradual

Workers do not normally detect noise-induced hearing loss early on, because it occurs without pain and its onset is gradual. By the time the individual realizes there is a problem, the amount of hearing loss may be significant. This is why annual baseline/audiometric testing for employees exposed to hazardous noise is so important.

When employees are exposed to noise levels which are equal to or exceed 85 decibels (dBA) for eight hours or more, OSHA requires employers to implement a hearing conservation program. The major components of a hearing conservation program are:

Noise level monitoring -

The goals of noise monitoring should be to identify employees who should be included in the hearing conservation program and to select proper hearing protection

Audiometric testing -

This is required for all affected employees. A licensed and certified person must do a baseline audiogram within six months of the employee's first exposure. Thereafter, the testing must be done annually

Hearing protection -

Employers are required to provide hearing protection for all employees who are exposed to noise above 85dBA.

Employee training -

A training program is mandatory for all employees exposed at or above 85 dBA. Training must be repeated at least once a year and must be updated to be consistent with changes in protective equipment and work processes

Recordkeeping -

Employers must maintain accurate records of all employee noise exposure measurements for two years. Employee audiometric records must be kept for the duration of employment, plus five years.

Controls to limit exposure

Under OSHA rules employees must have a work environment where exposure to noise does not exceed 90 decibels (dBA) for eight hours. If this standard is exceeded, employers are required to use the following control methods, to limit employee exposure:

1. Engineering Controls— Reduce noise at the source by enclosing loud machinery, placing employees in sound-proof booths or installing noise dampening controls to the machinery. Engineering controls are the preferred first step to eliminate and control the noise at its source.
2. Administrative Controls— Move employees from noisy areas to quieter areas so that the amount of time they are exposed to high intensity noise is reduced.
3. Personal Protective Equipment— Require the use of earplugs, ear muffs or stoppers to reduce the amount of noise entering the employee's ear. Make sure they are properly trained on how to wear them.

Hearing Conservation

Safety Training Handout

■ **Respect Your Hearing**

- Can you picture what your life would be like if you could not listen to music or sounds from the television?
- Hearing loss is 100% preventable. But once you lose your hearing you will probably never get it back.
- Because hearing loss creeps up on us slowly, many people are unaware of the damage they have done to their hearing until it's too late.

■ **Some Symptoms of Hearing Loss Are:**

- Speech sounding garbled as if the speaker's head is in a barrel.
- Ringing, roaring or other constant sounds in your head.
- Pain and discomfort when people talk.
- People getting frustrated when having conversations with you because of your inability to understand them.

■ **When is Noise Harmful?**

- Exposure to 85 or more decibels averaged over 8 working hours.
- Exposure to 140 or more decibels for any period of time.

■ **Types of Hearing Protection**

- Disposable ear plugs expand and conform to the shape of your ear canal.
- Reusable ear plugs come in a variety of shapes and sizes to fit different ears.
- Canal caps are convenient when you are exposed to loud noises for short periods.
- Ear muffs fit over your entire ear.

■ **Hearing Evaluations**

- Hearing tests called audiograms are required within six months of an exposure to noise levels above 85 decibels. These tests are conducted by the company.
- Your hearing will be monitored with yearly audiograms (also conducted by the company) to track any changes in your ability to hear.
- If your hearing deteriorates, you will be fitted with new protective hearing devices.